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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,949	03/29/2001	Blaise Didillon	PET-1926	2944

23599 7590 01/22/2003

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EXAMINER

GRIFFIN, WALTER DEAN

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 01/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-9

Office Action Summary

Application No.

09/819,949

Applicant(s)

DIDILLON ET AL.

Examiner

Walter D. Griffin

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Response to Amendment

The claim objections and rejections as described in paper no. 7 have been withdrawn in view of the amendment filed on November 13, 2002.

Allowable Subject Matter

The indicated allowability of claims 11-21 is withdrawn in view of the newly discovered reference to Podrebarac et al. (US 6,444,118). Rejections based on the newly cited reference follow.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 22, 28, and 31 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Sulfur removal steps that are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The disclosed process is a process for producing gasolines with low sulfur contents. Clearly, sulfur removal steps are essential to any process in which low sulfur gasoline is obtained from a sulfur-containing feed.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22, 26, 28, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 22, 28, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are sulfur reduction steps.

Claim 26 is indefinite because, in step (c1), the heavy fraction is treated but, in step (b), the heavy fraction is mixed with at least one intermediate fraction. Therefore, it is unclear if step (c1) refers to the heavy fraction alone or refers to a heavy fraction-intermediate fraction mixture.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podrebarac et al. (US 6,444,118).

The Podrebarac reference discloses a process for reducing the sulfur content of a naphtha stream. This stream may be obtained from a catalytic cracker and may contain mercaptans such as ethyl mercaptan as well as thiophenes. The process comprises contacting a full boiling range naphtha stream and hydrogen with a catalyst in a first reaction zone. Reactions in the first reaction zone include the selective hydrogenation of diolefins and the production of higher molecular weight sulfur compounds. The reacted full boiling range naphtha is then separated into at least three fractions, a light naphtha that contains reduced sulfur amounts, an intermediate fraction, and a heavy naphtha fraction. The heavy naphtha fraction is then treated in a hydrodesulfurization zone to remove sulfur. The heavy fraction and intermediate fraction are then combined and subjected to a hydrodesulfurization treatment. See column 3, line 19 through column 8, line 63.

The Podrebarac reference does not disclose the presence of acetylenic compounds or nitrogen compounds in the feed, does not disclose percent hydrogenation of the olefins as in claim 14, does not disclose the separation of the effluent from the first reaction zone into four

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fractions and treatment of the two intermediate fractions as in claim 20, and does not disclose catalytic reforming of an intermediate fraction.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Podrebarac by utilizing a feed that contains acetylenic and nitrogen compounds because one would expect a feed that contains these compounds in addition to the disclosed compounds would be effectively treated in the process since this type of feed is similar chemically and physically to the disclosed feed.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Podrebarac by limiting the hydrogenation of olefins to levels as in claim 14 because olefins are a desired component of the final product.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Podrebarac by separating the effluent from the first reactor into four fractions and treating the two intermediate fractions because the reference discloses separation into at least three fractions and because these intermediate fractions would contain sulfur and therefore would require further treatment.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Podrebarac by reforming any intermediate fraction because Podrebarac discloses the existence of reformed naphtha and because reforming results in an increase in the octane number of the naphtha.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

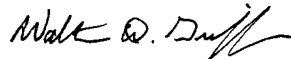
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is 703-305-3774. The examiner can normally be reached on Monday-Friday 6:30 to 4:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Walter D. Griffin
Primary Examiner
Art Unit 1764

WG
January 17, 2003